Enabling Results Driven Government
Virginia Tech University

April 21, 2005
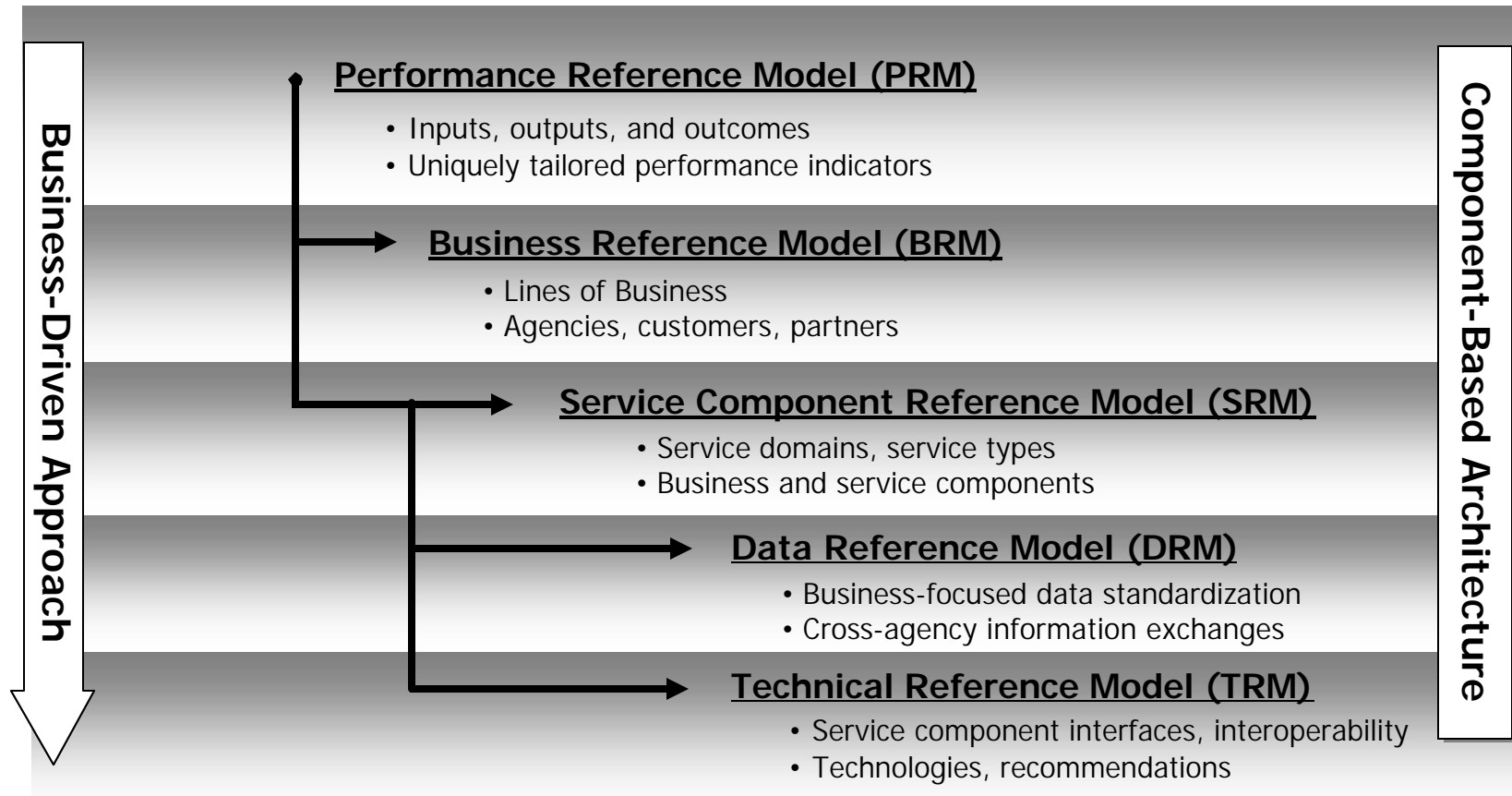
E·GOV

- Introduction
- FEA Reference Models
- CONOPS
- LoBs and Services
- HUD Case Study
- Results
- FEA Action Plan

Business-Driven Approach

Component-Based Architecture

Performance Reference Model (PRM)
- Inputs, outputs, and outcomes
- Uniquely tailored performance indicators

Business Reference Model (BRM)
- Lines of Business
- Agencies, customers, partners

Service Component Reference Model (SRM)
- Service domains, service types
- Business and service components

Data Reference Model (DRM)
- Business-focused data standardization
- Cross-agency information exchanges

Technical Reference Model (TRM)
- Service component interfaces, interoperability
- Technologies, recommendations

- Provides a common language and set of work products for implementing EA programs

- Identifies opportunities to eliminate or consolidate redundant applications and processes

- Identifies current and future opportunities for agency collaboration

- Provides a means to gather and review IT data efficiently and effectively
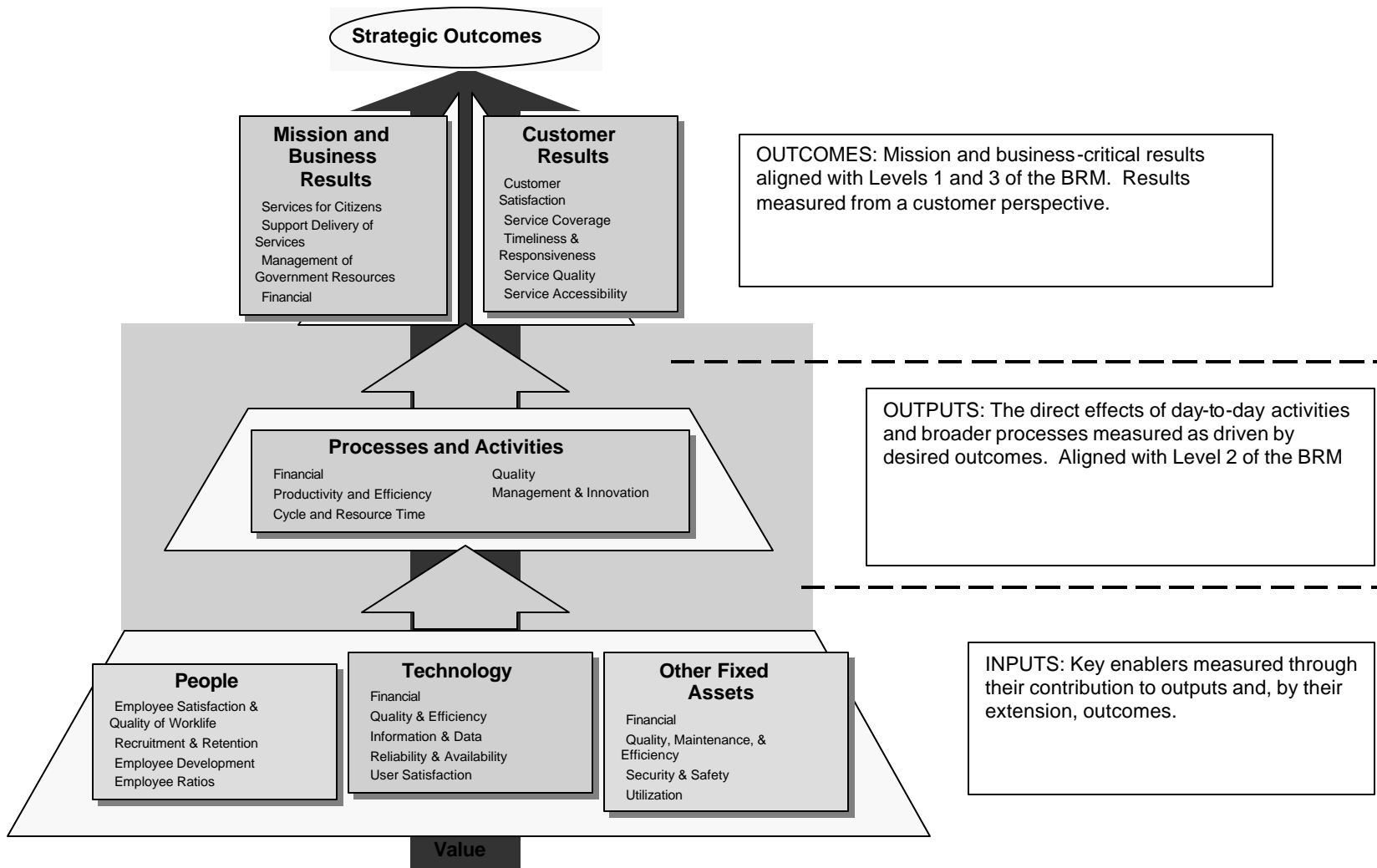
- The FEA will bring its stakeholders together

- Key stakeholders include
    - CIOs
    - Chief Architects
    - Program Officials
    - Agency Leadership
    - Congress
    - Industry
    - Academia

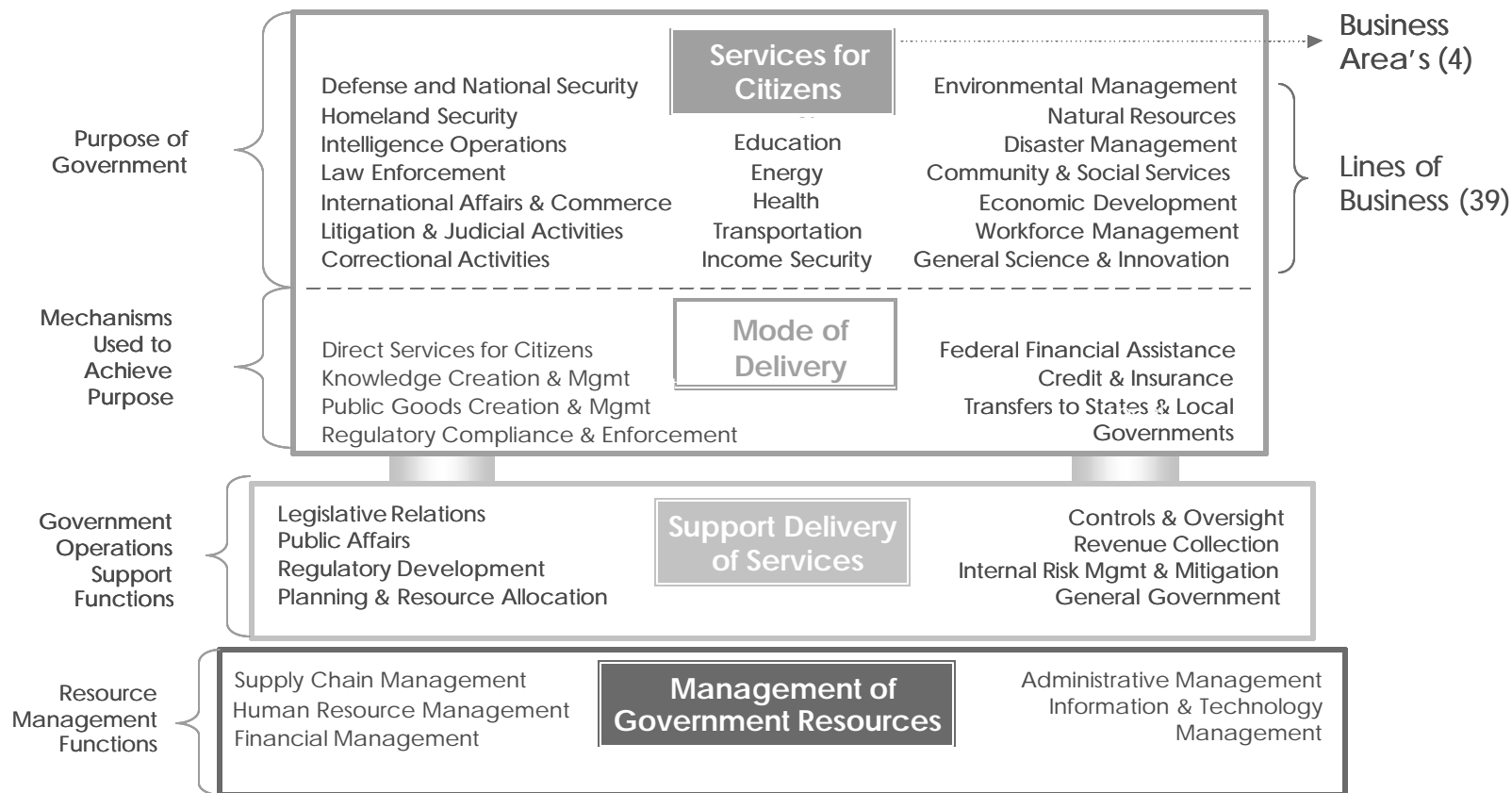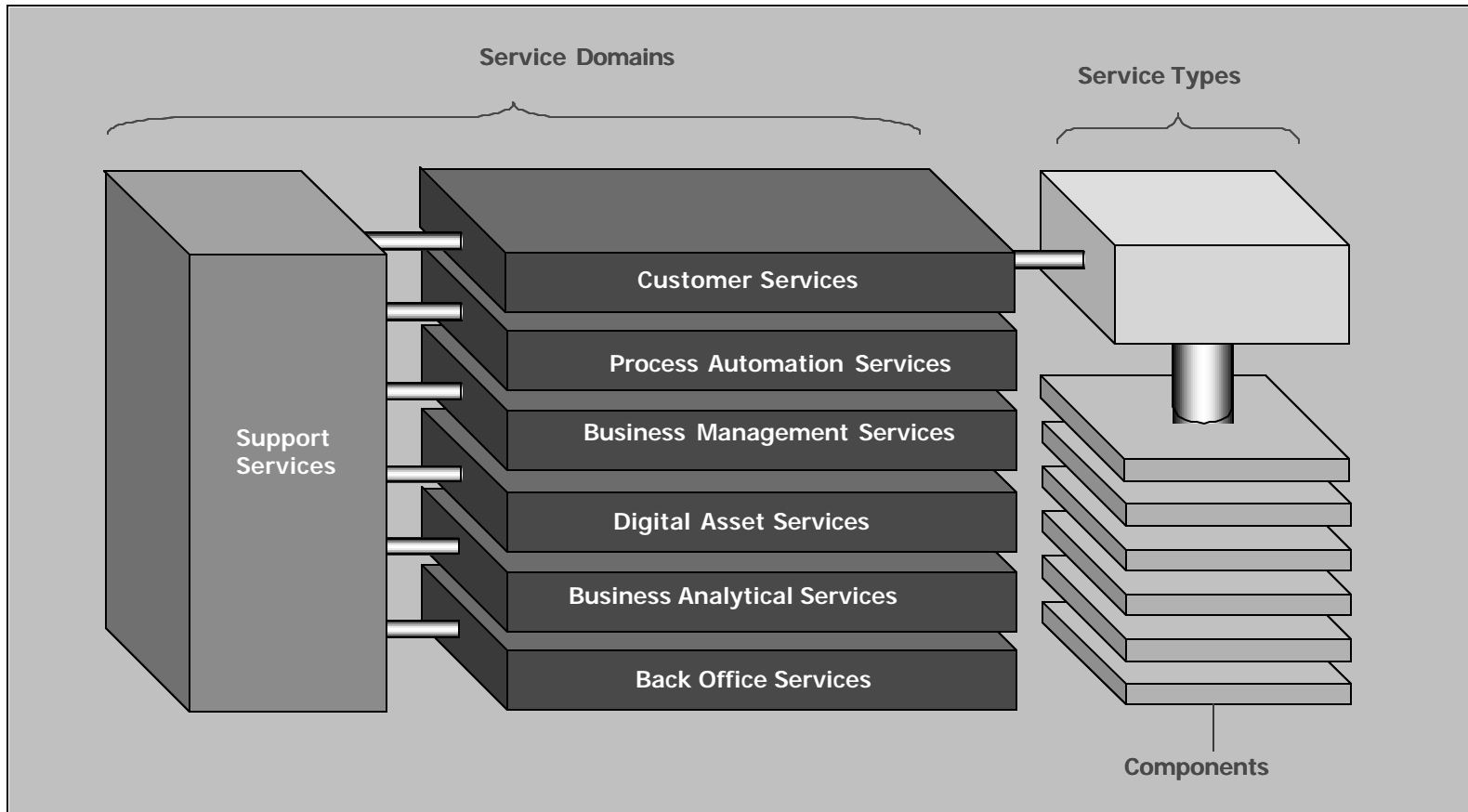- The FEA needs participation from its stakeholders to mature

Strategic Outcomes

Mission and Business Results

Services for Citizens
Support Delivery of Services
Management of Government Resources
Financial

Customer Results

Customer Satisfaction
Service Coverage
Timeliness & Responsiveness
Service Quality
Service Accessibility

OUTCOMES: Mission and business-critical results aligned with Levels 1 and 3 of the BRM. Results measured from a customer perspective.

Processes and Activities

Financial
Productivity and Efficiency
Cycle and Resource Time
Quality
Management & Innovation

OUTPUTS: The direct effects of day-to-day activities and broader processes measured as driven by desired outcomes. Aligned with Level 2 of the BRM

People

Employee Satisfaction & Quality of Worklife
Recruitment & Retention
Employee Development
Employee Ratios

Technology

Financial
Quality & Efficiency
Information & Data
Reliability & Availability
User Satisfaction

Other Fixed Assets

Financial
Quality, Maintenance, & Efficiency
Security & Safety
Utilization

INPUTS: Key enablers measured through their contribution to outputs and, by their extension, outcomes.

Value

Business Reference Model

The Business Reference Model (BRM)

Business Area's (4)

Purpose of Government

	Services for Citizens	
Defense and National Security		Environmental Management
Homeland Security		Natural Resources
Intelligence Operations	Education	Disaster Management
Law Enforcement	Energy	Community & Social Services
International Affairs & Commerce	Health	Economic Development
Litigation & Judicial Activities	Transportation	Workforce Management
Correctional Activities	Income Security	General Science & Innovation

Lines of Business (39)

Mechanisms Used to Achieve Purpose

	Mode of Delivery	
Direct Services for Citizens		Federal Financial Assistance
Knowledge Creation & Mgmt		Credit & Insurance
Public Goods Creation & Mgmt		Transfers to States & Local
Regulatory Compliance & Enforcement		Governments

Government Operations Support Functions

	Support Delivery of Services	
Legislative Relations		Controls & Oversight
Public Affairs		Revenue Collection
Regulatory Development		Internal Risk Mgmt & Mitigation
Planning & Resource Allocation		General Government

Resource Management Functions

	Management of Government Resources	
Supply Chain Management		Administrative Management
Human Resource Management		Information & Technology
Financial Management		Management

Service Component Reference Model

Technical Reference Model

Service Access and Delivery

Access Channels
Web Browser
Wireless/PDA
Collaboration/Communications
Other Electronic Channels

Delivery Channels
Internet
Intranet
Extranet
Peer to Peer (P2P)
Virtual Private Network (VPN)

Service Requirements
Legislative/Compliance
Authentication/Single Sign-on
Hosting

Service Transport
Supporting Network Services
Service Transport

Service Platform and Infrastructure

Support Platform
Wireless/Mobile
Platform Independent
Platform Dependent

Delivery Servers
Web Servers
Media Servers
Application Servers
Portal Servers

Hardware/Infrastructure
Servers/Computers
Embedded Technology Devices
Peripherals
Wide Area Network (WAN)
Local Area Network (LAN)
Network Devices/Standards
Video Conferencing

Software Engineering
Integrated Dev. Environment
Software Configuration Mgmt.
Test Management
Modeling

Database/Storage
Database
Storage

Component Framework

Security
Certificates/Digital Signature
Supporting Security Services

Presentation/Interface
Static Display
Dynamic Server-Side Display
Content Rendering
Wireless/Mobile/Voice

Business Logic
Platform Independent
Platform Dependent

Data Management
Database Connectivity
Reporting and Analysis

Data Interchange
Data Exchange

Service Interface and Integration

Integration
Middleware
Enterprise Application Integration
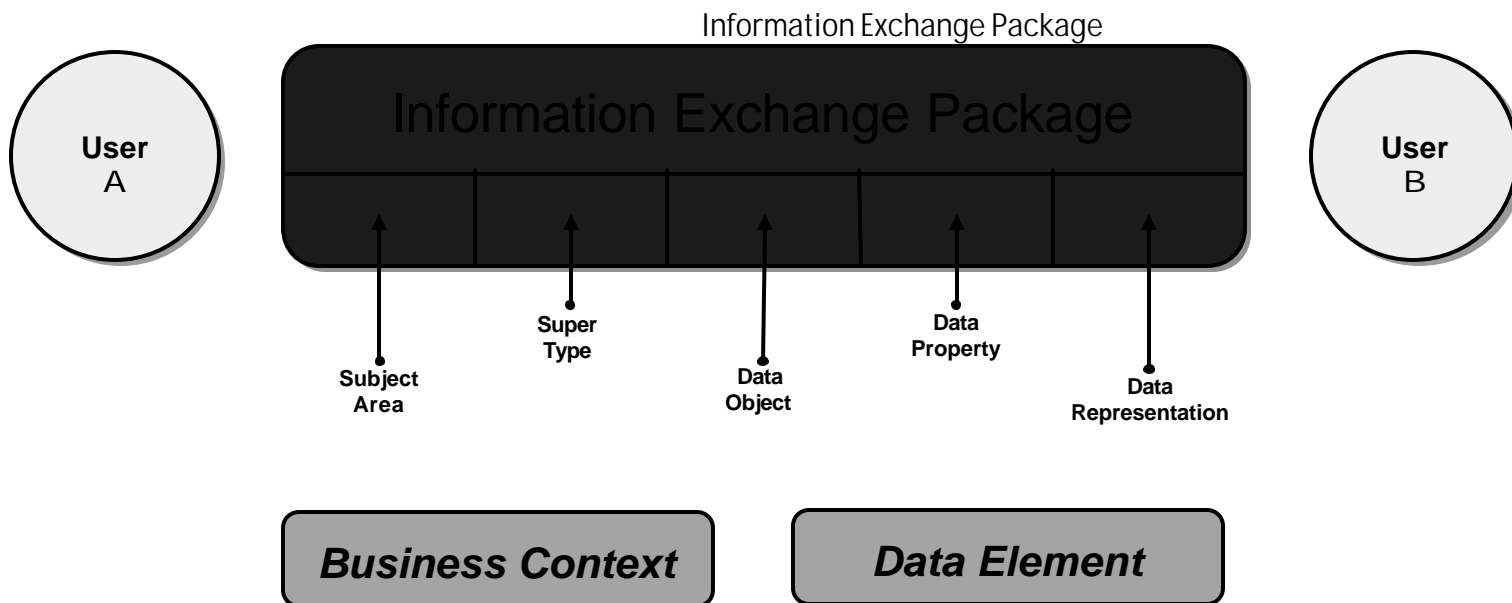
Interoperability
Data Format/Classification
Data Types/Validation
Data Transformation

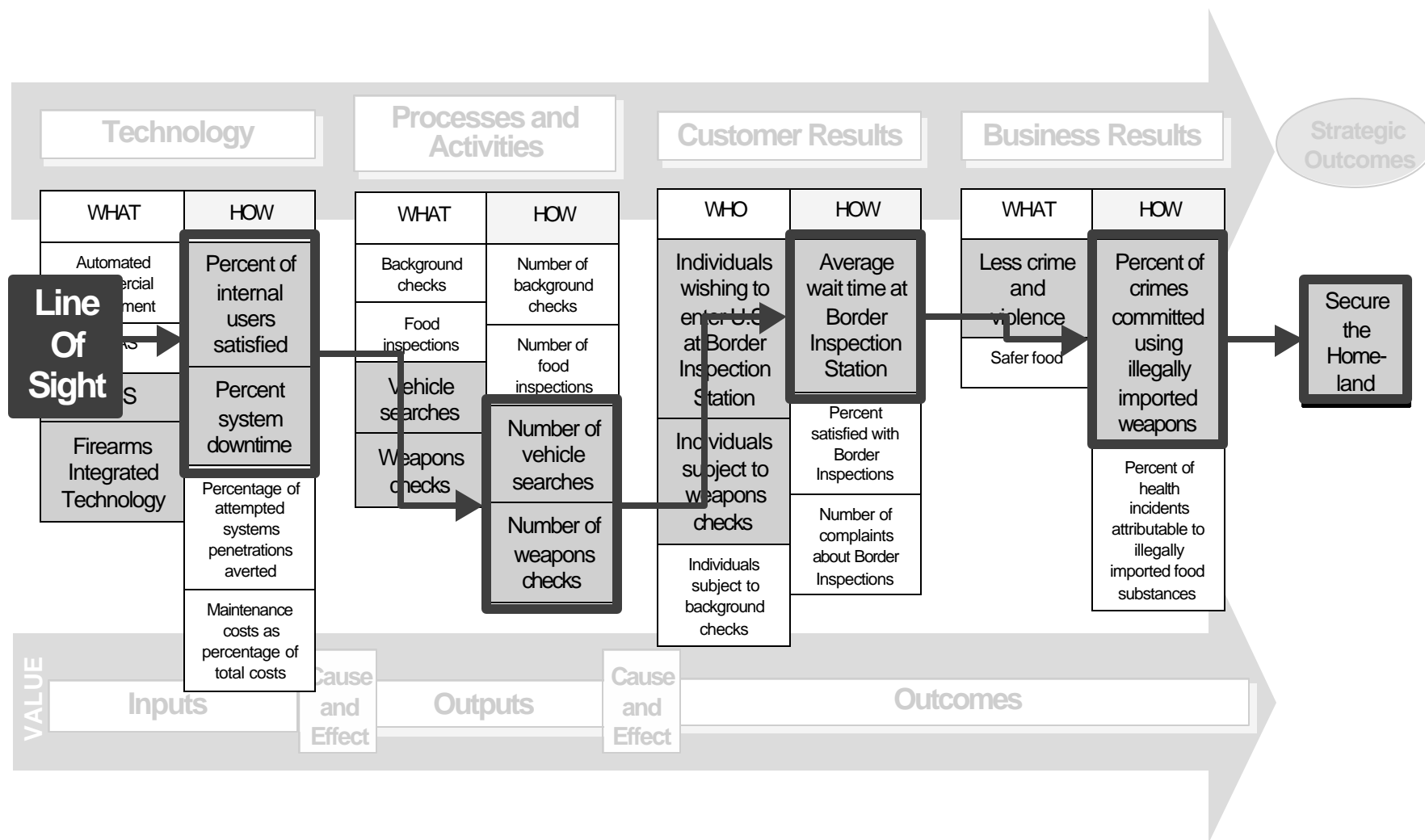**Interface**
Service Discovery
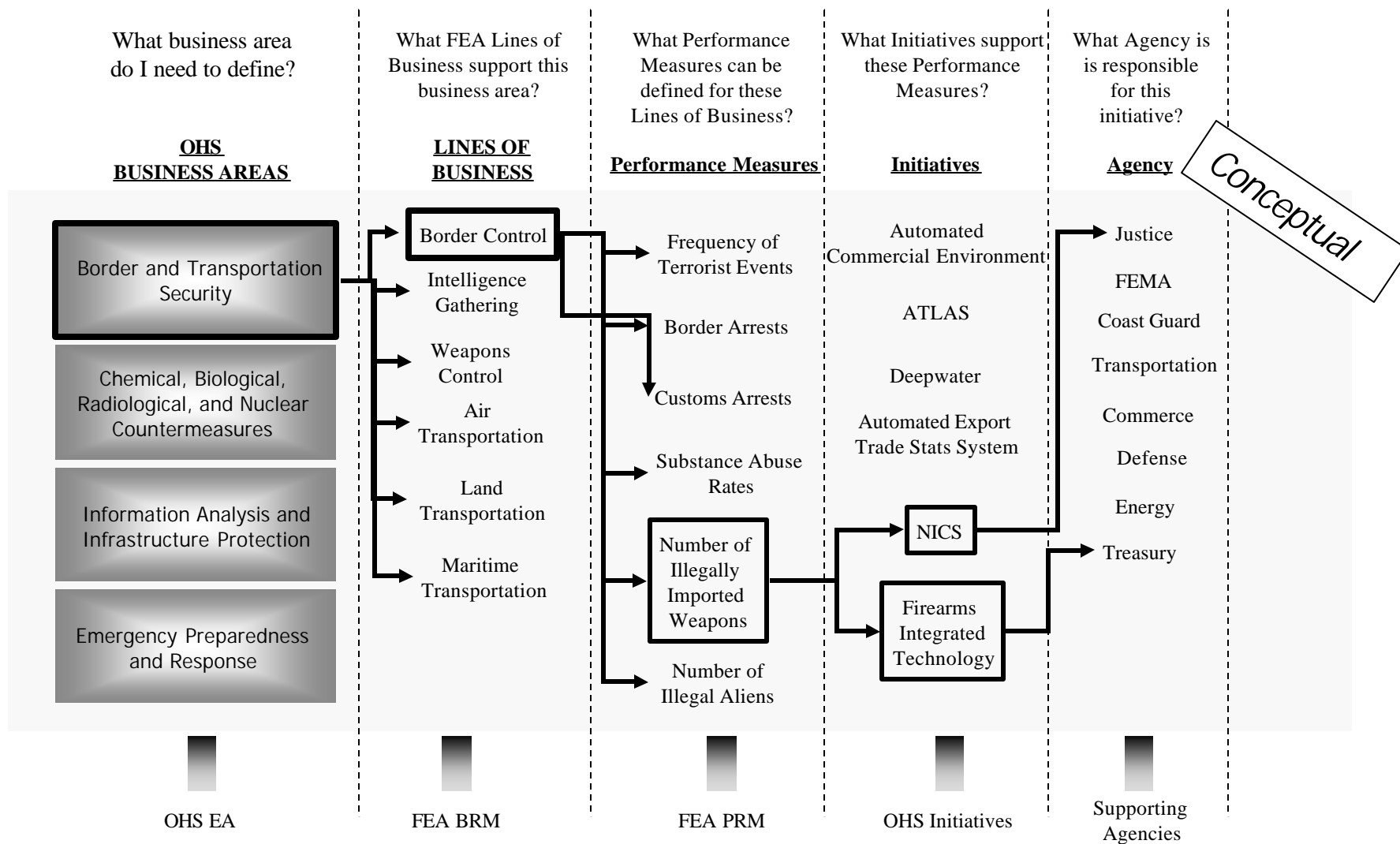Service Description/Interface

Performance Reference Model "Line of Sight"

	Technology		Processes and Activities		Customer Results		Business Results		Strategic Outcomes

Line Of Sight

WHAT	HOW
Automated Commercial Environment	Percent of internal users satisfied
	Percent system downtime
Firearms Integrated Technology	Percentage of attempted systems penetrations averted
	Maintenance costs as percentage of total costs

WHAT	HOW
Background checks	Number of background checks
Food inspections	Number of food inspections
Vehicle searches	Number of vehicle searches
Weapons checks	Number of weapons checks

WHO	HOW
Individuals wishing to enter U.S. at Border Inspection Station	Average wait time at Border Inspection Station
Individuals subject to weapons checks	Percent satisfied with Border Inspections
	Number of complaints about Border Inspections
Individuals subject to background checks	

WHAT	HOW
Less crime and violence	Percent of crimes committed using illegally imported weapons
Safer food	
	Percent of health incidents attributable to illegally imported food substances

Secure the Home-land

VALUE

Inputs	Cause and Effect	Outputs	Cause and Effect	Outcomes

Performance Reference Model

Conceptual

What business area do I need to define?	What FEA Lines of Business support this business area?	What Performance Measures can be defined for these Lines of Business?	What Initiatives support these Performance Measures?	What Agency is is responsible for this initiative?
OHS BUSINESS AREAS	**LINES OF BUSINESS**	**Performance Measures**	**Initiatives**	**Agency**

OHS BUSINESS AREAS
- Border and Transportation Security
- Chemical, Biological, Radiological, and Nuclear Countermeasures
- Information Analysis and Infrastructure Protection
- Emergency Preparedness and Response

LINES OF BUSINESS
- Border Control
- Intelligence Gathering
- Weapons Control
- Air Transportation
- Land Transportation
- Maritime Transportation

Performance Measures
- Frequency of Terrorist Events
- Border Arrests
- Customs Arrests
- Substance Abuse Rates
- Number of Illegally Imported Weapons
- Number of Illegal Aliens

Initiatives
- Automated Commercial Environment
- ATLAS
- Deepwater
- Automated Export Trade Stats System
- NICS
- Firearms Integrated Technology

Agency
- Justice
- FEMA
- Coast Guard
- Transportation
- Commerce
- Defense
- Energy
- Treasury

OHS EA | FEA BRM | FEA PRM | OHS Initiatives | Supporting Agencies

ARCHITECT	INVEST	IMPLEMENT
• Develop and maintain enterprise architecture • Review, reconcile and approve segment architecture for the agency's core lines of business and common IT services	• Select IT initiatives to define the agency's IT investment portfolio • Control IT investments • Evaluate IT investments	• Develop and maintain segment architecture • Develop IT program management plan • Execute IT projects

← END-TO-END GOVERNANCE →

Agencies: SBA, Treasury, Defense, EPA, Interior, Justice, DHS, Energy, HHS

Lines of Business: Financial Management, Human Resources, Health, Community and Social Services, Education, Economic Development, Natural Resources, Homeland Security

Service Components:
- Mapping / Geospatial / Elevation / GPS
- Security Management
- Records Management

Management of Government Resources

Services to Citizens
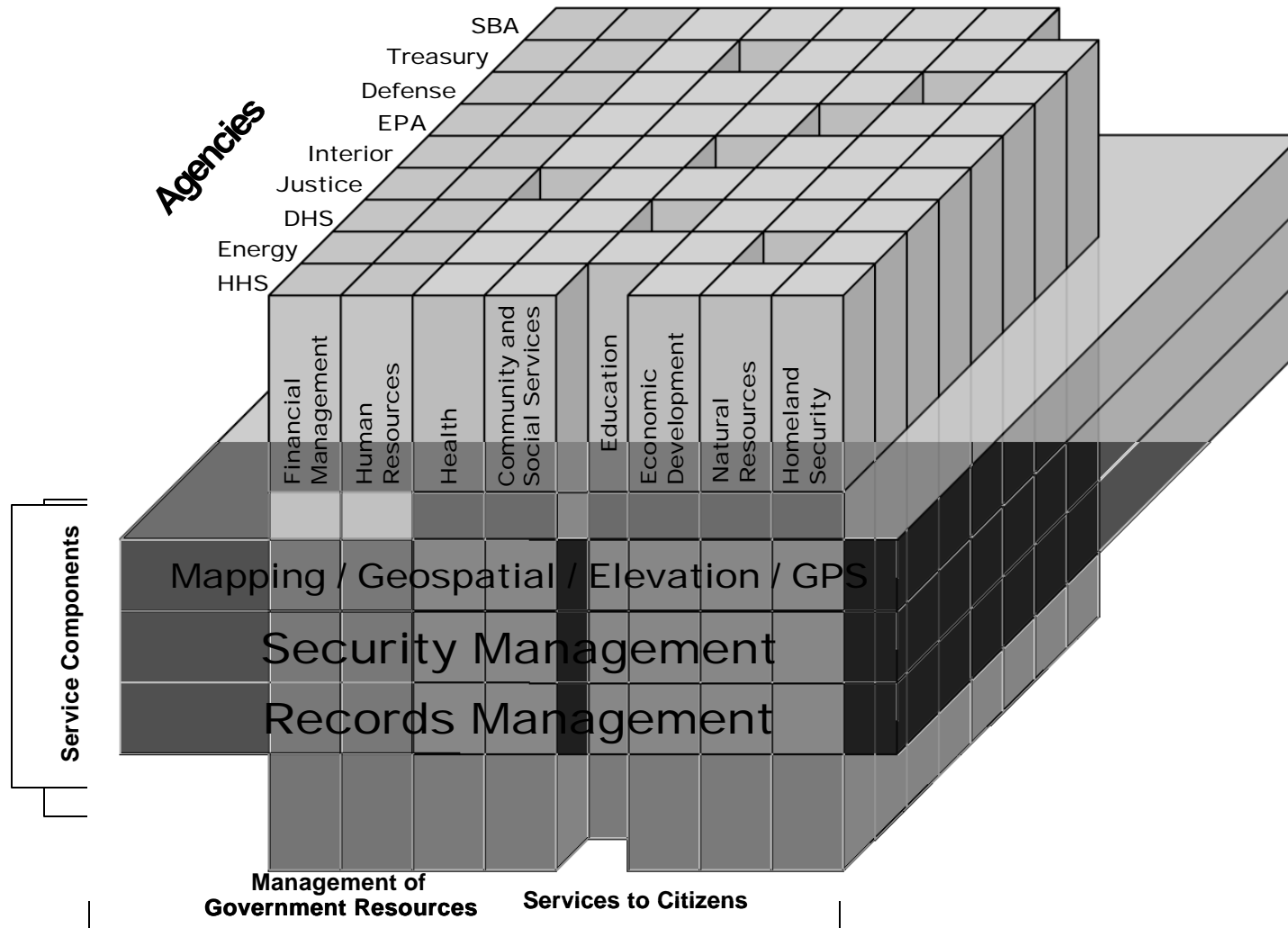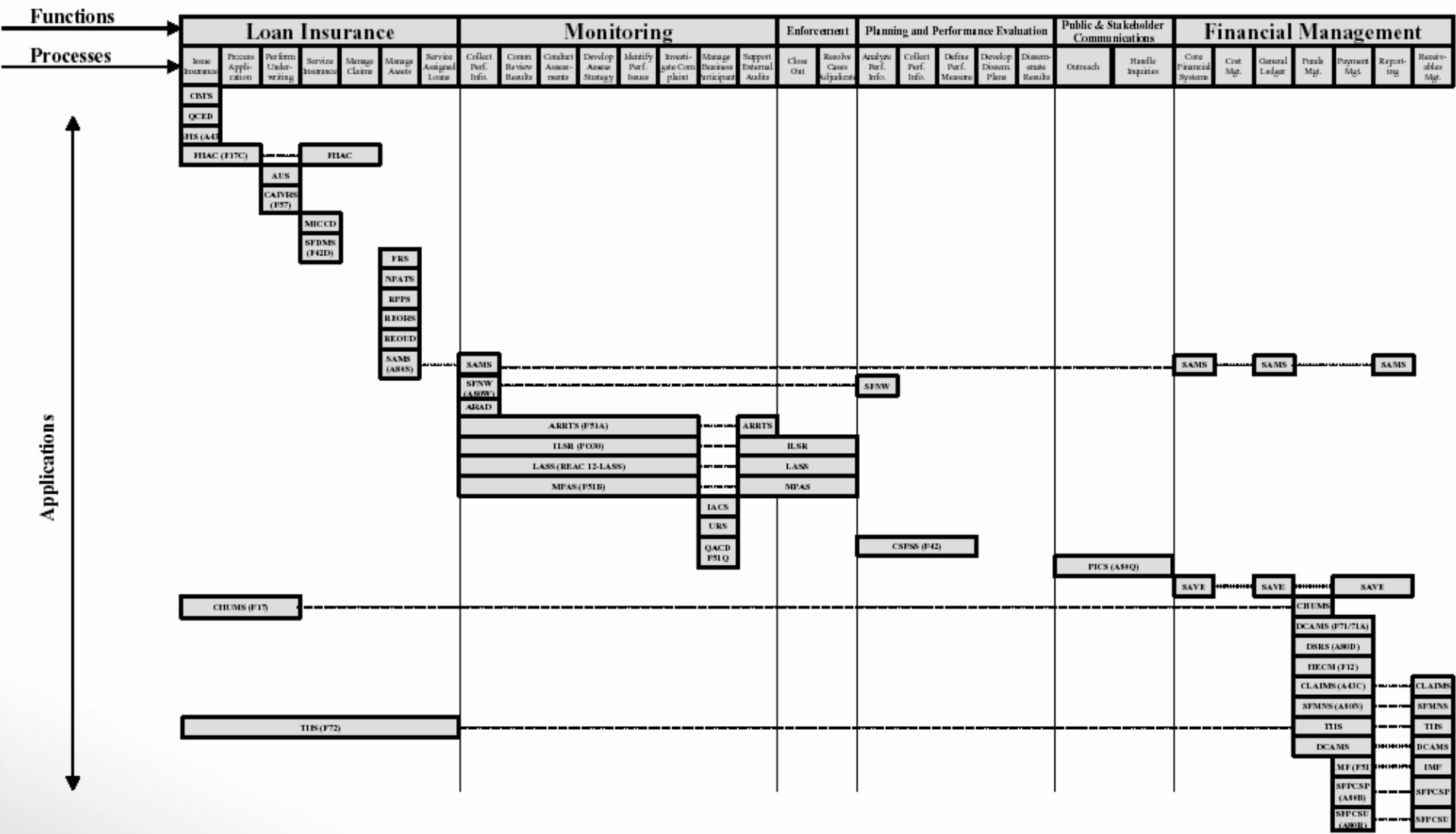
Mortgage Insurance LoB Target Architecture

Bottom Line: Return on Investment

Functions

Processes

Current Architecture

Transition Planning

Systems

Transition Planning

Target Architecture

Functions

Processes

Core Systems

Shared Systems

Reporting
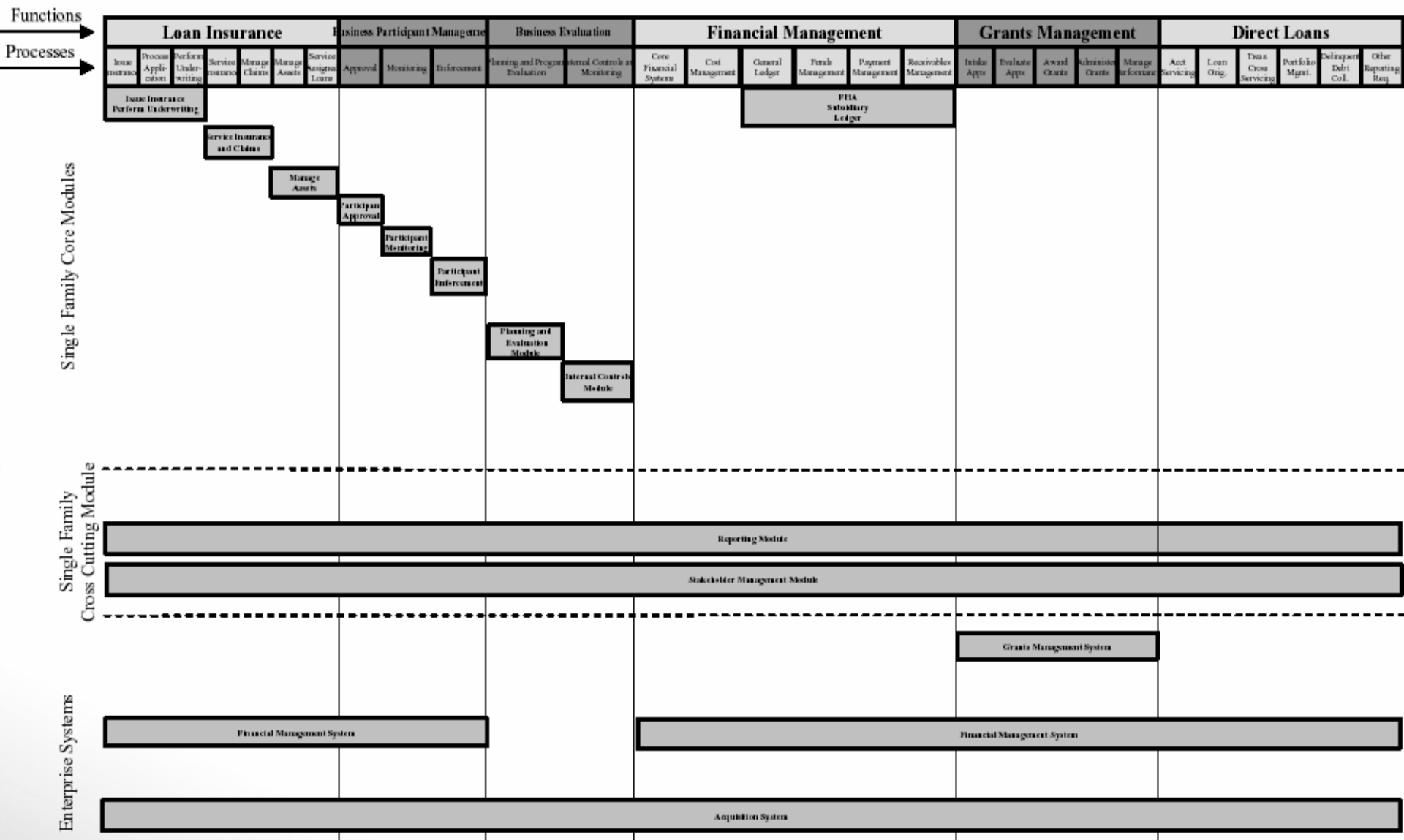
Stakeholder Management

Inputs	• Four months of time from Architects and Program Officials • Three years to transition to target state • $9 million dollars in DME (not including infrastructure)

Outputs	• Reduced the number of systems by nearly 80% • Minimized functional overlap in the Mortgage Insurance LoB • Modernized HUD's technology base • Decreased the total cost of ownership from $28 million dollars to $16 million

Outcomes	• Increased the number of loans processed per day • Identified faster, the number of lenders who are illegally discriminating • Identified earlier, the lenders providing HUD with bad loans • Identified non-viable lenders, and responded faster

Government to Citizen	Government to Government
▪ 3.4 million taxpayers filed using Free-File ▪ Recreation One-Stop provided easy access to ~3,000 federal parks & other recreation sites	▪ 15,000 users registered with DisasterHelp.gov ▪ Disaster Management services used in 43 actual emergencies
Government to Business	**Internal Efficiency & Effectiveness**
▪ 2.2 million applications received for Employer Identification Numbers (EIN) ▪ 350,000 business tax forms filed electronically in first year of availability	▪ More than 65 million job-seekers used USAJOBS to create over 600,000 on-line resumes ▪ E-Payroll consolidating payroll providers from 26 to 2 partnerships

LoBs projected to save over $5 billion dollars in the next 10 years.

FEA Mission, Vision and Goals

FEA MISSION	Develop and use the Federal Enterprise Architecture to improve government efficiency and effectiveness

VISION	The Federal Enterprise Architecture Practice is the cornerstone for the design, development and implementation of information resources government-wide

GOALS

1. Improve utilization of government information resources to focus on core agency mission and service delivery to citizens by using the FEA.

2. Enhance cost savings and cost avoidance through a mature FEA government-wide.

3. Increase cross-agency and inter-government collaboration.

2005 Strategic Initiatives

- Articulate FEA Value and Build Trust with EA Partners
    - Refine the FEA Value Proposition
    - Develop and Implement a Communications Strategy
    - Gather and Share EA Case Studies
- Evolve the FEA to Drive Results
    - Establish and Implement a Governance Framework
    - Link the PRM to the PART Framework
    - Align Enterprise Architecture to Agency Strategic Planning
    - Complete the Development of the Data Reference Model (DRM)
    - Engineer the FEA to Standardize Linkages between Reference Models
    - Guide the Development of the Security and Privacy Profile
    - Launch a Records Management Profile
    - Create a Geospatial Profile
    - Develop an Enterprise Architecture Glossary of Terms
- Develop and Evolve the Lines of Business and Other Collaborative Opportunities
    - Support the Identification of New Lines of Business
    - Support the IT Security Line of Business
    - Guide Agency Transition Planning Toward Common Solutions
    - Support the Integration of the E-Government and LoB Initiative Architectures
    - Enhance the Value and Business Benefits of Collaboration Tools
- Measure EA Value with the EA Assessment Program

1.   Articulate FEA value and build trust with EA partners

2.   Evolve the FEA to drive results

3.   Develop and evolve the LoBs and other collaborative opportunities

4.   Measure EA value with the EA Assessment Program

1. Articulate FEA value and build trust with EA Partners

✓ Refine the FEA value proposition

✓ Develop and implement a communications strategy

✓ Gather and share EA case studies

2. Evolve the FEA to drive results

- ✓ Establish and implement a governance framework

- ✓ Link the PRM to the PART

- ✓ Align EA to agency strategic planning

- ✓ Complete the development of the DRM

2. Evolve the FEA to drive results (cont.)

✓ Engineer the FEA to standardize linkages between reference models

✓ Guide the development of the security and privacy profile

✓ Launch a records management profile

✓ Create a geospatial profile

✓ Develop an EA Glossary of Terms

3. Develop and evolve the LoBs and other collaborative opportunities

- ✓ Support the identification of new LoBs

- ✓ Support the IT Security LoB

- ✓ Guide agency transition planning towards common solutions

- ✓ Support the integration of the E-Gov and LoB initiative architectures

- ✓ Enhance the value and business benefits of collaboration tools

4. Measure EA value with the EA Assessment Program

✓   Provide assistance to agencies to mature their EAs

✓   Evolve EA assessment tool

For Further Information
www.egov.gov

E·GOV

Legislative Branch

Legislation

Programs

Agencies
(Executive Branch)

HUD	DoT	DOI	EPA

Indian Community Development Block Grant Program	CDFI Fund: Financial and Technical Assistance	Indian 477 - Job Placement and Training	Rural Water Supply Projects	Water Resources Research	Alaska Native Villages

Community and Social Services LoB **Natural Resources LoB**

IT Resources